What Is Claimed Is:

1. A method of forming an array substrate for use in a liquid crystal display device, comprising:

forming a gate line on a substrate along a first direction, a gate pad at one end of the gate line, and a gate electrode extending from the gate line;

forming a first gate insulating layer on the substrate to cover the gate line, the gate pad, and the gate electrode;

forming an active layer of intrinsic amorphous silicon and an ohmic contact layer of extrinsic amorphous silicon layer sequentially on the first gate insulating layer over the gate electrode;

forming a data line, a data pad, a source electrode, and a drain electrode, the data line disposed extending along a second direction to perpendicularly cross the gate line to define a pixel region, the data pad disposed at one end of the data line, the source electrode extending from the data line on a first portion of the ohmic contact layer, and the drain electrode spaced apart from the source electrode on a second portion of the ohmic contact layer to form a thin film transistor;

forming a second insulating layer over an entire surface of the substrate to cover the thin film transistor;

forming a black matrix on the second insulating layer to cover the thin film transistor, the gate line, and the data line except a first portion of the drain electrode;

forming a third insulating layer over an entire surface of the substrate to cover the black matrix;

patterning the first, second, and third insulating layers to expose the first portion of drain electrode, to form a gate pad contact hole exposing the gate pad, and to form a data pad contact hole exposing the data pad;

forming a first transparent electrode layer over an entire surface of the substrate to cover the patterned third insulating layer and contacting the exposed first portion of the drain electrode;

coating an adhesive color film on the first transparent electrode layer, the adhesive color film having a color resin on a surface facing the first transparent electrode layer;

irradiating a laser to portions of the adhesive color film corresponding to the pixel region;

removing the adhesive color film after irradiating the laser to form a color film within the pixel region wherein the laser is irradiated;

repeating coating the adhesive color film, irradiating the laser and removing the adhesive color film to form the color film within all of the pixel regions;

forming a second transparent electrode layer over an entire surface of the substrate to cover the color filter and the first transparent electrode layer; and

patterning the first and second transparent electrode layers to form first and second pixel electrodes, a double-layered gate pad terminal, and a double-layered data pad terminal.

2. The method according to claim 1, wherein the black matrix includes an opaque organic material having a low dielectric constant.

3. The method according to claim 1, wherein the color resin includes one of red, green, and blue colors.

4. The method according to claim 1, wherein the laser includes one of an infrared ray laser and a visible ray laser.

5. The method according to claim 1, wherein the laser includes one of a solid laser, a semiconductor laser, and a gas laser.

6. The method according to claim 1, wherein the laser has an energy density ranging from about 0.01 mJ/cm^2 to about 10 mJ/cm^2.

7. The method according to claim 1, wherein the thin film transistor includes the gate electrode, the active layer, the ohmic contact layer, the source electrode, and the drain electrode.

8. The method according to claim 1, wherein the first and second pixel electrodes form a sandwich pixel electrode structure.

9. The method according to claim 1, wherein the color filter is interposed between the first and second pixel electrodes.

10. The method according to claim 1, wherein the second insulating layer is interposed between the thin film transistor and the black matrix.

11. The method according to claim 1, wherein each of the first, second, and third insulating layers include one of silicon nitride and silicon oxide.

12. The method according to claim 1, wherein each of the first and second transparent electrode layers includes at least one of indium tin oxide and indium zinc oxide.

13. The method according to claim 1, wherein forming the data line includes forming a storage metal layer on the first insulating layer over the gate line.

14. The method according to claim 13, wherein the second and third insulating layers expose a first portion of the storage metal layer.

15. The method according to claim 14, wherein the first pixel electrode contacts the exposed first portion of the storage metal layer.

16. The method according to claim 13, wherein the storage metal layer and a portion of the gate line constitute a storage capacitor with the first insulating layer interposed between the storage metal layer and the gate line.

17. The method according to claim 1, wherein the first pixel electrode directly contacts the substrate.

18. A method of forming an array substrate device for use in a liquid crystal display device, comprising:

forming a gate line on a substrate along a first direction, the gate line including a gate pad at one end thereof;

forming a first insulating layer on the substrate to cover the gate line;

forming a data line over the first insulating layer along a second direction perpendicular to the first direction on the substrate, the data line

defining a pixel region with the gate line and including a data pad at one end thereof;

forming a thin film transistor at a crossing region of the gate and data lines, the thin film transistor including a gate electrode, a semiconductor layer, a source electrode, and a drain electrode;

forming a black matrix overlapping the thin film transistor, the gate line, and the data line except a first portion of the drain electrode;

forming a second insulating layer over an entire surface of the substrate to cover the black matrix;

patterning the first and second insulating layers to expose the first portion of drain electrode, to form a gate pad contact hole exposing the gate pad, and to form a data pad contact hole exposing the data pad;

forming a first transparent electrode layer over an entire surface of the substrate to cover the patterned second insulating layer and contacting the exposed first portion of the drain electrode;

dropping a liquid-type color resin onto the first transparent electrode layer within the pixel region to form a color filter within the pixel region;

forming a second transparent electrode layer over an entire surface of the substrate to cover the color filter and the first transparent electrode layer; and

patterning the first and second transparent electrode layers to form first and second pixel electrodes, a double-layered gate pad terminal, and a double-layered data pad terminal.

19. The method according to claim 18, wherein dropping the liquid-type color resin includes an inkjet head having a nozzle.

20. The method according to claim 18, wherein the liquid-type color resin includes a solvent.

21. The method according to claim 19, wherein one micro-droplet of the liquid-type color resin injected through the nozzle into the pixel region ranges from about 0.4 picoliters (pl) to about 400 picoliters (pl).

22. The method according to claim 18, wherein the black matrix includes an opaque organic material having a low dielectric constant.

23. The method according to claim 18, wherein the liquid-type color resin includes one of red, green, and blue colors.

24. The method according to claim 18, wherein the first and second pixel electrodes form a sandwich pixel electrode structure.

25. The method according to claim 18, wherein the color filter is interposed between the first and second pixel electrodes.

26. The method according to claim 18, further comprising forming an additional insulating layer between the thin film transistor and the black matrix.

27. The method according to claim 18, wherein each of the first and second insulating layers include one of silicon nitride and silicon oxide.

28. The method according to claim 18, wherein each of the first and second transparent electrode layers includes at least one of indium tin oxide and indium zinc oxide.

29. The method according to claim 18, wherein forming the data line includes forming a storage metal layer on the first insulating layer over the gate line.

30. The method according to claim 29, wherein the second insulating layer exposes a first portion of the storage metal layer.

31. The method according to claim 30, wherein the first pixel electrode contacts the exposed first portion of the storage metal layer.

31. The method according to claim 29, wherein the storage metal layer and a portion of the gate line constitute a storage capacitor with the first insulating layer interposed between the storage metal layer and the gate line.

33. The method according to claim 18, wherein the first pixel electrode directly contacts the substrate.